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September 15, 2011

M/T PLOUTOS
Final Environnemental Audit
Conducted Underway Between Malta and Gibraltar
August 14-17. 2011

Preliminary

The undersigned conducted the Final Environmental Audit aboard the M/T PLOUTOS, while the vessel was underway between Malta and Gibraltar in the Mediterranean Sea. The audit was conducted in accordance with Attachment A, Section B of the Special Master Appointment and Scope of Work pursuant to the criminal case, United Sates of America v. Ionia Management S. A., Criminal No.3: CR134 (JBA). The audit process consisted of a review of Safety Management System (SMS) and Environmental Management System (EMS) documents; records and procedures related to environmental matters; MARPOL required logs and records; inspection and testing of vessel waste handling equipment, including the oily water separator (OWS), incinerator, sewage treatment plant (STP); and interviews with vessel personnel.

The PLOUTOS is a 42,048 GRT, crude oil and product carrier, built by New Century Ship Building Co. Ltd., Xin Giang, China and delivered on December 15, 2006. The vessel has a total cargo capacity of 529,691 bbls at 98%. The vessel is powered by a HHM-MAN-B&W 5S60MC-C with a BHP14690 and has a service speed of 14.5 knots. Vessel particulars are attached.

Audit participants included:

Dimitrios Karaiskakis, Master
Leo M. Doctolero, Chief Engineer
Allan Roy Q. Donguines. Chief Officer
Laurentiu Dagla, Second Engineer
Rone T.Natonton., Fourth Engineer
Lloyd G. Gargar. Third Officer
Calos L. Reyes, Bosun
Jay E Valena, Oiler

In addition to the above, various crewmembers from all departments were interviewed at different times with regard to their duties related to environmental aspects of ship operation and environmental awareness. Mr. Georgios Karagiorgis, the Corporate Compliance Manager (CCM) for Ionia Management, was also aboard to assist with the audit. The crew was

comprised of Filipino nationals, with the exception of the Master, who is Hellenic and the 2/E who is Romanian. A copy of the crew list is attached.

The schedule of the final audit was as follows:

August 14, 2011
- 0610 – Arrive aboard vessel, off Valletta, Malta
- 0807-0840 – Witness bilge and waste oil tank soundings by Oiler, with 3/O, CCM, C/E, and 4/E
- 0840-1800 – Review EMS, SMS and other documents/manuals preparatory to audit

August 15, 2011
- 0803-0835 – Witness bilge and waste oil tank soundings by Oiler, with 3/O, CCM, C/E, and 4/E
- 0900-0930 – Opening Meeting with Master, Relieving Master, Chief Officer (C/O), Chief Engineer (C/E), and Second Engineer (2/E) on Bridge.
- 0930-1215 – Review logs, records, plans, etc; carryout discussions with Master, C/O, and CCM
- 1215-1300 – Lunch
- 1300-1500 – Continue review of logs, records, plans, etc.
- 1500-1530 – Coffee Break
- 1530-1700 – Deck walk with Master, C/O, Bosun, and CCM.
- 1700-1800 – Gather and review notes
- 1800-1830 – Dinner
- 1830-1930 – Review PPE manuals (OWS, STP, incinerator)
- 1930 – Retire for evening.

August 16, 2011
- 0803-0835 – Witness bilge and waste oil tank soundings by Oiler, with 3/O, CCM, C/E, and 4/E
- 0835-1200 – Engine room with C/E; review logs, etc.
- 1200-1300 – Lunch
- 1300-1500 – Discussions with C/E
- 1500-1630 – One on one interviews with various crewmembers
- 1630-1800 – Review and organize notes
- 1800-1900 – Dinner
- 1900-1930 – Prepare for Closing Meeting
- 1930-2000 – Closing Meeting with Master, C/E, C/O, 2/E, and CCM

August 17, 2011
- 1000 – Depart vessel

To implement the EMS, Ionia Management developed a comprehensive Environmental Management Manual (EMM), which has been implemented aboard. The EMM contains environmental policies and procedures in alignment with the Scope of Work, as well as additional environmental procedures, developed by Ionia Management. In addition, environmental procedures are also contained in the vessel's SMS Manual. Overall, I found the

environmental procedures and requirements to be well implemented. Specifically, I found procedures in place and being followed for the proper disposal of waste; records required by paragraph IV.a. of the Scope of Work well maintained, including the Oil Record Books (Part I and Part II), Sounding Log, and engine room alarm records; SWOMS equipment installed and maintained in accordance with paragraph IV.b. of the Scope of Work; procedures and methodology in place to analyze and compare manual tank soundings with electronic records; procedures in place for continuous assessment and improvement in environmental compliance; and substantial implementation of the engineering and record keeping requirements contained in Attachment A to the Scope of Work. I found the officers and crew to be very cooperative and positive throughout the audit. Senior officers, including the Master, C/E, and C/O were knowledgeable of the Scope of Work requirements and the EMM and appeared fully committed to the purpose and philosophy of the EMM. This was clearly demonstrated throughout my audit and during discussions with these officers, as well as members of the crew.

Following are my observations and comments. They are supported by the attached EMS Audit Checklist and the enclosures to this report.

Observations and Comments

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1. Section 1 of the EMM contains Ionia's Environmental Policy, Ethics Policy and Non-Retaliation Policy. Areas specified where the policies are to be posted aboard the vessel include the Master's Office, Chief Engineer's Office, Bridge, CCR, and ECR. I found these policies to be properly posted. In response to a recommendation from a previous vessel audit, and to ensure crewmembers have access to the posted polices and are fully aware of their contents, these polices have also be posted in the officer & crew mess rooms and smoking rooms.

2. Section 11 of the EMM details the procedure for crewmembers to report environmental concerns and to remain anonymous if so desired. Crewmembers may report such concerns by calling a toll free telephone number, anonymous reporting email or anonymous reporting letter by post mail. Reporting procedures are also mentioned in the Code of Ethics pamphlet, distributed to all crewmembers on board the crew. When I questioned various crewmembers on the reporting procedures and options, all seemed to be fully aware. The name and contact information for the Corporate Compliance Manager (CCM) is posted in various locations aboard the vessel. All crewmembers questioned were aware of the name and role of the CCM.

3. Included in the EMM is a Declaration of Environmental Commitment, Form ENV 020. Procedures for the implementation of the form are contained in Chapter 10. I found the form properly completed for each crewmember on board. A previous audit aboard another Ionia vessel found confusion with regard to the proper use of the form and recommended the procedures be clarified. Though no specific change appears to have been made to the EMM, this appears to have been accomplished. The Master and various crewmembers interviewed were fully aware of the intent and purpose of the form.

4. The Declaration of Environmental Compliance, Form ENV 021, signed upon sign-off, is also being completed by all crewmembers. A previous audit noted, despite the requirement for all crewmembers to complete the form, only officers aboard were completing the form.

5. Environmental Procedures for Non-Crew Members, Form ENV 022, is no longer in use aboard. To reduce the amount of paperwork associated with carrying out the environmental procedures associated with non-crewmembers, Section 10.9 of the EMM has been revised to only require a notice at the gangway, informing individuals boarding the vessel of the company's environmental policies and requirements. I found this to be in place and an effective procedure. This change was recommended in a previous audit.

6. During my review of the Ballast Water Management Plan (BWMP), I found it to be in alignment with the IMO Guidelines and also to meet the ship-specific requirements of the U.S regulations. The Plan was fully updated with the latest U.S. requirements.

7. The vessel maintains a Ballast Water Log in the format required by the BWMP, detailing the ballast operations associated with each ballast water tank. Ballast water operations for each tank and operation are listed on a separate page (see attached). While this is acceptable, in order to more effectively track the history of each tank and reduce the volume of the log, I recommend operations for each tank be listed on the same page consecutively until the page is completed. Previously, operations for all tanks were listed on the same page. Based upon the recommendation in a previous audit, this was changed to the current system; however, the intent of the recommendation was not to start a new page for each operation. There were no entries in the Narrative Log (copy attached). Recommend the Chief Officer maintain the Narrative Log as required by the BWMP.

8. Ballast tanks are inspected annually under the vessel's Preventative Maintenance System and the amount of sediment recorded.

9. I reviewed the Oil record Book (ORB) Part I and found it very well maintained. The person conducting the operation is signing the appropriate entry. Both the C/E and the Master sign each page. The "I" Code is used for various operations including, overboard pipe removal & inspection, testing of the OWS and OCM, OWS, incinerator and STP training, seal removal and replacement, and disposal of galley cooking oil. Also, the "I"I Code is used to record weekly ROBs for the clean and dirty bilge holding tanks and Code C 12.4 is used to record the evaporation of water from the Incinerator Tank in accordance with the recommendations of MEPC.1 Circ. 640 dated November 4, 2008. This was a recommendation from a previous Ionia vessel audit. Attached are excerpts of the ORB providing a sampling of the entries.

10. The vessel maintains a Sounding Log, as required by Section IV and Attachment B to the Scope of Work. The procedures for the taking of soundings are also contained in Section 5.12 of the EMM. An excerpt of the Log is attached, as well as the form of the Log taken from Ionia's EMS Manual. As per a recommendation from a previous audit, a Remarks section has been added to the Log as well as a certification statement. I noted

soundings for the Maine Engine Scavenger Drain Tank, one of the tanks listed in paragraph 3.1 of the IOPP Supplement (copy attached), were not being recorded. This was corrected on the spot. The sounding was being recorded in the ORB on a weekly basis.

11. Waste Oil Tank soundings are taken daily by the oiler and witnessed by the 3/O and 4/E. Three soundings are taken and the average is recorded. The soundings are then compared to the SWOMS recorded soundings and Form ENV 023 completed. The form contains a comparison of the manual and SWOMS soundings and calculates the percent difference. Attached are the completed forms for the three days of sounding witnessed during my audit. All are within the accepted margin of 5%.

12. The vessel is equipped with a Luzhou-TeamTec Modal OGS 400C incinerator meeting the MEPC 76(40) international standard. The capacity of the incinerator according to the IOPP Supplement is 65 liters/h. The incinerator is operated on a regular basis to dispose of sludge. Following is a summary of the most recent operations:

8/11/11	100 liters processed in 2.5 hours	40.0 liters/hour
8/02/11	480 liters processed in 9.6 hours	50.0 liters/hour
8/01/11	780 liters processed in 15.5 hours	50.3 liters/hour
7/29/11	210 liters processed in 4.5 hours	46.7 liters/hour
7/28/11	690 liters processed in 13.5 hours	51.1 liters/hour
7/25/11	420 liters processed in 9.7 hours	43.3 liters/hour

During my audit, an operational test of the incinerator was conducted on 8/16/11, with the following timeline:

0855 – start blower
0900 – two diesel oil burners ignite 658 degrees C
0905 – one diesel oil burner and sludge burner operating
0907 – changed to smaller diesel oil burner, plus sludge burner
0908 – diesel oil burners shutdown; sludge burner only at 860 degrees C
1555 – incinerator operation stopped; total operation 420 minutes; thru-put 34.4 liters/hr

In addition to incineration, the vessel is also evaporating water from the Incinerator Waste Oil Tank, disposing of 130-240 liters per operation. The operations are properly recorded in the ORB.

13. The Garbage Management Plan (GMP) was updated on 6/20/10 to provide for ship-specific information and hazardous waste management procedures, based upon a recommendation from a previous audit. The GMP now contains ship specific information detailing location of garbage storage and segregation areas, details of equipment such as incinerator, galley food grinder and specific procedures/restrictions regarding their use. The GMP now addresses receptacles for hazardous waste and contains a table listing the categories and proper disposal procedures. Section 6.3 of the EMM also contains procedures for the disposal of hazardous waste. Ionia has also implemented a

Table 6 Company Garbage Receipt to account for disposal of both hazardous and non-hazardous waste ashore (copy attached).

14. An Environmental Performance Report, Form ENV 004, is submitted to the Ionia office on a monthly basis. Included on the form are garbage and hazardous waste disposal quantities.

15. A Spare Seal Inventory Log is maintained by the Master, and an Engine Room Seal Log is maintained by the C/E. Both logs are bound with sequentially number pages. Locations of seals are identified by a coded system, which corresponds to a specific description of the seal location (see attached). In addition, a piping system diagram identifies locations where seals are placed. In order to better identify the location of the seals for better tracking, the system was revised in response to a recommendation from a previous audit, which is reflected in the system now in place. Attached are sample pages from the seal logs.

16. The vessel has a Deckma oil content monitor (OCM), model OMD 2005, which conforms to requirements of MEPC 107(49). The OCM was last calibrated on 12/21/10 (copy of certificate attached). The Scope of Work requires recalibration at least annually, with copies of the certificates maintained on board. With the installation of the SWOMS, the flushing and sample lines to the OCM have been re-routed through the OWS Lock Box, disabling the OMD 2005 manual flushing valve. The OWS Lock Box's main function is to provide secured permissive functions that will only allow the 3-way overboard recirculation valve to be moved to the overboard position once all the permissive functions are met. It will not allow for the mixing of the flushing water and discharge sample and must sense that enough discharge sample is flowing to the OCM for at least the last 20 seconds before it will allow control of the 3-way overboard/recirculation valve by the OCM. The flush push button is located on the front of the Lock Box sealed cabinet. It is used to activate a solenoid valve in the Lock Box which causes a 3-way valve to rotate 180 degrees and send flushing water to the OCM. The pushbutton signal is sent to the main Logger control panel in the ECR where it records that the flushing water has been activated, and then a signal from the control panel is sent to the solenoid in the Lockbox to activate the 3-way flushing valve. The 3-way valve is used to select whether the sample or fresh water is sent to the OCM. The design will not allow mixing of the sample, thus ensuring that the sample cannot be diluted by fresh water. The flow switch inside the Lock Box senses when sample water is flowing to the OCM and provides a contact closure to the system. It also provides the contact closure to indicate to the Logger that the OWS is running.

17. The vessel is equipped with a Jowa AB Modal 3SEP oil water separator (OWS) meeting the standard of MEPC 107(49). Attached is a description of the system taken from the maker's manual.

18. An operational test of the OWS was carried on 8/16/11. Since the vessel was at sea and underway, an actual operation with the overboard valve open was conducted. Prior to the OWS operational test, the OCM was satisfactorily tested with the OMD test fluid. The OWS operational test was begun at 0908 stopped at 1021 local time. The source

tank start sounding was 9.35 m3 and ending sounding was 4.23 m3, resulting in a 4.4 m3 thru-put rate. The capacity of the OWS is 5 m3/hr. During the testing no alarming occurred, except for the test alarms.

19. Monthly operational testing of the OWS is being carried out and recorded in the ORB, as required by the Scope of Work and the EMM Section 5.17 is being carried out. According to the C/E, the test is a full operational test, drawing from the BHT and processing through the OWS. In addition, the OWS is operated on a regular basis to dispose of bilge water overboard. Following is a summary of recent operations:

8/11/11	4.25 m3 processed	0845-0946	4.3 m3/hr
7/26/11	12.1 m3 processed	0714-1000	4.4 m3/hr
6/27/11	8.63 m3 processed	0725-0918	4.8 m3/hr
6/15/11	10.26 m3 processed	0738-0947	4.8 m3/hr
5/16/11	19.33 m3 processed	0725-1130	4.8 m3/hr

20. The OWS discharge sample line was found properly painted in accordance with the requirements of the Scope of Work. This was noted as a deficiency on the previous Ploutos audit, as well as the Estia audit.

21. The floor plates covering the Emergency Bilge suction and bilge cross-over valves were properly painted as required by the Scope of Work. This was noted as a deficiency during the previous audit aboard the Ploutos.

22. As per the Scope of Work requirements, samples for content analysis were taken from the Bilge Well Aft, BHT, Bilge Well Fwd, and OWS discharge. All samples taken appeared to be water only with no visible oil. See attached photos. Attached is a copy of the sample analysis and correspondence for samples taken on 9/10/10.

23. The vessel has a computerized Preventative Maintenance System (PMS) using the Ulysses software. The PMS contains detailed maintenance procedures for the incinerator, OWS and STP, which are in alignment with the manufacturer's recommendations.

24. According to the Oil Record Book Part II, the ODME is tested monthly by the C/O. I reviewed the test procedure (copy attached) and the ODME tape to verify proper testing and found all satisfactory. All slops are discharged ashore and there has been no discharges at sea recorded in the ORB. The overboard line is blanked. Seals are placed on sample line connections and valves.

25. The vessel is fitted with a sewage treatment plant (STP) made by Hamworthy type ST3A Super Trident with a rated capacity for BOD 3.0 kg per day and a 6.0 m3 capacity sewage holding tank. All black water is treated with the recommended chemical dosage for discharge overboard. According to the C/E, the STP is in continuous operation, both in port and at sea, with the direct overboard valve kept chained and locked in the closed position, except during short periods of maintenance, while at sea, and only treated sewage is discharged. Gray water is pumped directly overboard; however, the capability

exists to divert gray water to the sewage holding tank. Attached is a description of the STP taken from the maker's manual.

26. The Oil Transfer Procedures, required by 33 CFR 155.720, are in full alignment with the regulations. This was noted as a deficiency on a previous audit. Attached is a copy of the procedures.

27. I inspected the SOPEP Locker and found it fully equipped in accordance with the current inventory Attached is a copy of the current inventory, which is updated monthly by the Chief Officer. During a recent Port State Control Exam under the Indian Ocean MOU on 7/30/11, the following deficiency was issued: *"sopep inventory at sopep locker is for 21st feb 11. Also as per inventory there should be 6 nos squeeze but only 3 were there out of which 2 were broken".* Attached is a copy of the PSC report along with the Corrective Action Report identifying the root cause, corrective action, and preventive actions.

28. A flexible hose inventory is kept for hoses over 40 mm, with hoses stored in the mid-ship house and forecastle. In response to a recommendation from a previous audit, tags have been attached to each hose to identify the hose and its use. The inventory is updated every 6 months and when new hoses are added. The last update was on 8/9/11.

29. Vessel personnel are carrying out weekly inspections and quarterly sampling to comply with the requirements of the EPA's recently adopted National Pollutant Discharge Elimination System (NPDES) Vessel General Permit. The required annual inspection was completed by the Master on 12/31/10. The Master was unable to produce a copy of the ENOI filed and the EPA permit letter. Recommend this be place aboard before the vessel calls a U.S. port. It is noted that these regulations only apply to vessels calling U.S. ports.

30. The completed Fleet Engineering Surveys, Form ENV 015, were reviewed. Copies of the three most recent surveys completed are attached. The survey form has been revised to conform to the recommendation of the U.S. Government. Nothing remarkable was contained in the surveys.

31. I observed various engine room pumps and machinery in operation during the period of time the vessel was underway. The engine room was noted to be in an exceptionally clean condition. Minimal lube oil leakages were noted from the main engine. No oil or oily residue was noted in the bilges or bilge wells. The bilge well below the main engine fly wheel was also free of any oily residues. According to the C/E, if any oil residue accumulates in the mid bilge well below the M.E. flywheel, the oily residue is removed manually and dumped into the SBOT to avoid contamination of the BHT. The bilge wells contained only small quantities of relatively clean water. The purifier room was very clean, with no evidence of excessive leakages from the purifiers. Auxiliary diesel engines on line, and fuel oil and lube oil pumps and valves were also noted to be leak free. Contrary to these observations, during a recent Port State Control Exam under the Indian Ocean MOU on 7/30/11, the following deficiency was issued: *"for eng room bilges have slight oil near to tray in the bilges and inside drip tray below fo, do transfer pump".*

Attached is a copy of the Corrective Action Report identifying the root cause, corrective action, and preventive action. Also attached are photos depicting the condition of the engine room.

32. The BHT was last cleaned on 3/23/11. No leakages were noted from operating cooling water and general service pumps and there was no evidence of excessive leakages from static pumps. The accumulation of fresh water in the bilge wells appeared to be due to condensation on pipes from the main engine air cooler. Based upon review of the ORB bilge well transfer entries and the Sounding Log, bilge loading is minimal.

33. Similar to the engine room, both the cargo pump room and steering gear room were noted to be exceptionally clean, with no apparent leakages from pumps.

34. The manifold trays on deck on either side to contain any leakages or drips during loading, discharging and disconnection of shore connections are adequate relative to the requirements. FO vent containment, bunker line containment and sludge discharge containment are adequate and meet the U.S. Pollution Prevention Regulations.

35. The present engineering staff comprised of C/E, 2/E, two 3/Es, 4/E, two oilers, one engine cadet and an electrician, appeared adequate to handle the operational, maintenance and repairs workloads for the systems, equipment and components on board. All the staff appeared to be professional and knowledgeable with relevant experience for the job allocated. They are fully aware of the effort needed to minimize the waste streams development. The vessel is certified for UMS operation and manned as per company guidelines. In port and during cargo operations the Engine room is continuously manned as and when required.

36. Prior to joining MARPOL training is carried out in Manila for crewmembers. Weekly shipboard training, which includes safety, security and environmental training is carried out as per the six-month training schedule. Attached is a copy of the schedule for 2011. Dates when training is conducted are annotated on the schedule. In addition, environmental training is also carried out during monthly Safety Committee Meetings. Computer based training (CBT) has also been implemented on board. Attached is an excerpt from the EMM covering the training programs ashore and on board.

37. During my audit, I interviewed the following crewmembers:

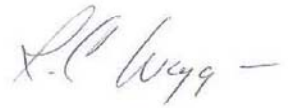
    L. Arriesgado (Messman) – 8 months aboard
    A. Romero (Ordinary Seaman) – 3 months aboard
    J Valena (Oiler) – 8 months aboard
    J. Aquitan (Able Seaman) – 6 days aboard
    J. Jimenez (Electrician) – 3 months aboard
    L. Colobong (Engine Cadet) – 7 months aboard

    I found, without exception, their knowledge, awareness and understanding of Ionia's environmental policies and procedures to be very good.

38. Ionia has an effective internal environmental auditing procedure in place. The last Internal ISM Audit, which covers some environmental components, was conducted on 9/4-6/10 and the last Internal Environmental Audit on 5/7/11. The vessel also underwent an ISO 9000/14001 audit by DNV on 3/31/10. Two non-conformity notes were issued related to environmental aspects and environmental objectives and targets, as per the attached DNV report. Corrective actions were completed on 6/16/10. Attached are updated Environmental Aspects & Impacts Evaluation Control Sheet, ENV 002, and updated Environmental Objectives and Targets, ENV 003.

Overall Ionia has a well implemented Environmental Management System. The condition of the vessel and waste management equipment is very good. The Scope of Work and EMM requirements are well implemented on board. All the personnel on board cooperated fully during the audit and were sincerely interested and very positive in complying with the environmental procedures.

Respectfully submitted by:



Capt. Richard C. Wigger, USCG-Ret.
Independent Environmental Consultant

Enclosures:

1. Completed Environmental Checklist
2. Ship's Particulars
3. Crew List
4. Ballast Water Handling Log
5. Ballast Water Handling Log Narrative
6. Oil Record Book Part I Excerpt (7 pages)
7. Sounding Log Excerpt
8. Sounding Log Form
9. Supplement to IOPP Certificate (8 pages)
10. Envirologger Checklist, Form ENV 023 (3 pages)
11. Chief Engineers Weekly Report (2 pages)
12. OCM Calibration Certificate dated 12/21/10
13. Excerpt of OWS Maker's Manual (5 pages)
14. Company Garbage Receipt
15. Spare Seals Inventory (2 pages)
16. Engine Room Seal Logbook (4 pages)
17. Seal Location Diagrams (9 pages)
18. Bilge Water Analysis (5 pages)
19. ODME Test Procedure (2 pages)
20. Sewage Treatment Plant Diagram
21. Oil Transfer Procedures
22. SOPEP Equipment Inventory dated 7/31/11
23. India PSC Report

24. PSC Corrective Action Report (6 pages)
25. Fleet Engineering Survey (9 pages)
26. Training Program for 2011 (2 pages)
27. Company Procedures Manual Training Section Excerpt (7 pages)
28. DNV Non-Conformity Notes (4 pages)Environmental Aspects & Impacts Evaluation & Control Sheet, ENV 002 (2 pages)
29. Environmental Targets & Objectives, ENV 003 (9 pages)
30. Photos